

CLAIMS

1. An apparatus comprising:
a media access controller (MAC);
a configurable packet switch; and
a network protocol stack in silicon coupling said media
access controller to said configurable packet switch.

2. The apparatus according to claim 1, wherein said
network protocol stack comprises a TCP/IP stack.

3. The apparatus according to claim 2, wherein said
network protocol stack comprises a TCP/IP/UDP stack.

4. The apparatus according to claim 1, further
comprising:

a security port configured to couple an external security
protocol processor to said apparatus.

5. The apparatus according to claim 1, further
comprising:

embedded SSL and IPsec processing functionality.

6. The apparatus according to claim 1, further comprising:

a high bandwidth bus configured to couple said apparatus to one or more external devices.

7. The apparatus according to claim 6, wherein said bus comprises a RapidIO (RIO) bus.

8. The apparatus according to claim 6, wherein said bus comprises a PCI bus, a PCI-X bus, or a SPI-4 bus.

9. The apparatus according to claim 1, further comprising:

a buffer configured to couple said media access controller to said network protocol stack.

10. The apparatus according to claim 1, further comprising:

an interface circuit configured to couple said apparatus to a host processor.

11. The apparatus according to claim 1, further comprising an interface circuit configured to couple said network protocol stack to a memory.

12. The apparatus according to claim 11, wherein said interface circuit comprises a double data rate (DDR) interface.

13. The apparatus according to claim 6, wherein said bus is configured to couple said apparatus to a iSCSI/iFC mapper.

14. The apparatus according to claim 13, wherein said iSCSI/iFC mapper comprises a programmable logic device configured to add and strip iSCSI and/or iFC protocol wrappers.

15. The apparatus according to claim 14, wherein said iSCSI/iFC mapper comprises an embedded programmable logic circuit (EPLC) .

16. The apparatus according to claim 1, wherein said media access controller is configured to couple said apparatus to

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a physical layer device having an operating speed configurable to any rate in the group consisting of 100Mbps, 1Gbps, and 10Gbps.

17. The apparatus according to claim 1, wherein said media access controller (MAC) comprises an ethernet MAC.

18. The apparatus according to claim 1, wherein said configurable packet switch is configured to send SCSI packets to either a high speed bus port or a microprocessor.

19. An apparatus comprising:

means for coupling to a physical layer of a network;

means for sending packets to any of a plurality of locations; and

means for running multiple protocol layers simultaneously at greater than 1Gbps rates, said running means coupled between said coupling means and said sending means.

20. A method for coupling components of a storage area network (SAN) via an internet-work packet (IP) network comprising the steps of:

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5 receiving and sending packets to a physical layer of said
internet-work packet (IP) network;

running an IP protocol layer and at least one other protocol layer simultaneously at greater than 1Gbps rates; and

sending SCSI packets to either a high speed bus port or a microprocessor.

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